WORKING LOAD LIMIT CHART (W.L.L.)

This chart applies to general purpose chain slings made of chain and components manufactured to I.S.O Grade 80 (T) EN818 or equivalent International Standards, also Grade 100. For ratings of special purpose slings consult with Chain and Rigging.

The Uniform Method for Rating GRADE 80 Chain Slings

Note: Chain slings manufactured to Australian Standard AS-3775.1-2004 has other W.L.L. on 3 & 4 leg chain slings. Refer to manufacturers specifications. All ratings are in tonnes.

Ratings can be higher based on actual manufacture WLL

Lifting Mode	1 leg 90°	2 leg			3 & 4 leg - Same ratings		
Chain Ø (mm)	Factor 1 0°	Factor 1.7 At 60°	Factor 1.4 At 90°	Factor 1 At 120°	Factor 2.6 At 60°	Factor 2.1 At 90°	Factor 1.5 At 120°
6.00	1.12	1.90	1.60	1.12	2.90	2.36	1.7
7.00	1.50	2.55	2.12	1.50	3.90	3.15	2.24
8.00	2.00	3.40	2.80	2.00	5.20	4.25	3.00
10.00	3.15	5.35	4.25	3.15	8.20	6.70	4.75
13.00	5.30	9.00	7.50	5.30	13.80	11.20	8.00
16.00	8.00	13.60	11.20	8.00	20.80	17.00	11.80
19.00	11.20	19.00	16.00	11.20	29.00	23.60	17.00
20.00	12.50	21.25	17.00	12.50	32.50	26.50	19.00
22.00	15.00	25.50	21.20	15.00	39.00	31.50	22.40
26.00	21.20	36.00	30.00	21.20	55.10	45.00	31.50
32.00	31.50	53.50	45.00	31.50	81.90	67.00	47.50

If chain is choked WLL must be derated by 20%

The Uniform Method for Rating GRADE 100 Chain Slings

Info from Gunnebo, Kuplex, Pewag, Thiele ⊠ Lowest Ratings from G100 Ratings Charts

Ratings can be higher based on actual manufacture WLL

Lifting Mode	1 leg 90°	2 leg			3 & 4 leg - Same ratings		
Grade 10	**Factor1 0°**	**Factor 1.7 at 60°**	**Factor 1.4 at 90°**	**Factor 1 at 120°**	**Factor 2.6 at 60°**	**Factor 2.1 at 90°**	**Factor 1.5 at 120°**
6mm	1.40	2.38	1.96	1.40	3.64	2.94	2.10
7mm	1.90	3.23	2.66	1.90	4.94	3.99	2.85
8mm	2.50	4.25	3.50	2.50	6.50	5.25	3.75
10mm	4.00	6.80	5.60	4.00	10.40	8.40	6.00
13mm	6.70	11.39	9.38	6.70	17.42	14.07	10.05
16mm	10.00	17.00	14.00	10.00	26.00	21.00	15.00
19mm	14.00	23.80	19.60	14.00	36.40	29.40	21.00
20mm	16.00	27.20	22.40	16.00	40.60	33.60	24.00
22mm	19.00	32.30	26.60	19.00	49.40	39.90	28.50

If chain is choked WLL must be derated by 20%

Flat Web Lifting Slings & Endless Round Slings EN 1492-2

Note: Some Web slings are manufactured using white (loomstate) webbing, In such cases refer to manufacturers specifications and product label.

Lifting Mode	Vertical	Choke	Basket Parallel	Basket @ 30°	Basket @ 60°	Basket @ 90°	2 Leg Sling @ 0° to 90°	3-4 Leg Sling @ 0° to 90°
W.L.L. Kg	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg	W.L.L. Kg
500	500	400	1,000	950	850	700	700	1,050
1,000	1,000	800	2,000	1,900	1,700	1,400	1,400	2,100
2,000	2,000	1,600	4,000	3,800	3,400	2,800	2,800	4,200
3,000	3,000	2,400	6,000	5,700	5,100	4,200	4,200	6,300
4,000	4,000	3,200	8,000	7,600	6,800	5,600	5,600	8,400
5,000	5,000	4,000	10,000	9,500	8,500	7,000	7,000	10,500
6,000	6,000	4,800	12,000	11,400	10,200	8,400	8,400	12,600
8,000	8,000	6,400	16,000	15,200	13,600	11,200	11,200	16,800
10,000	10,000	8,000	20,000	19,000	17,000	14,000	14,000	21,000
12,000	12,000	9,600	24,000	22,800	20,400	16,800	16,800	25,200

NOTE: Trigonometric Load Method is not a standard lifting practice but can be used for specialised lifts.

USE OF CHAIN SLINGS:

- Keep a register of all slings in use
- Never lift with a twisted chain
- Chain slings should be shortened with a shortening hook, never by knotting
- Protect the chain against sharp edges by sufficient padding
- Never point load a hook – the load should always seat correctly in the bowl of the hook
- Always use the correct size sling for the load, allowing for the included angle and the possibility of unequal loading
- The master link should always be able to move freely on the crane hook
- Avoid shock loading at all times
- Avoid severe sling angles, use protection over sharp or rough edges

MAINTENANCE OF CHAIN SLINGS:

- Chains should be inspected prior to use.
- Periodic thorough examination must be carried out at least every 12 months or more frequently according to statutory regulations, type and frequency of use.
- Chains with bent links or with cracks or gouges in the link should be replaced, as should deformed components such as bent master links, opened up hooks and any fitting showing signs of damage.

BASIC RULES FOR SAFE LIFTING:

- Always know the weight of the load you are going to lift
- Select the correct sling or slings for the lift
- Avoid severe sling angles, use protection over sharp or rough edges
- Make sure area and destination for load are clear before lifting
- Always use dunnage so that slings are removed without damage
- Report any damage
- Store slings in clean dry areas correctly.

INSPECTION & CARE OF WEB LIFTING SLINGS:

- Inspect slings for any damage before use
- Protect slings from sharp or abrasive edges
- Do not use slings above its W.L.L.
- Position load on dunnage to ensure easy removal of slings
- Do not twist or knot slings to shorten
- Do not use when temperatures exceed 90°C
- Do not snatch or shock load slings when llifting
- Check with manufacturer before using slings in or near Alkalis and Acids.

FOR LIFTING ADVICE, SALES & SERVICE VISIT

www.chainandrigging.co.nz

Phone: 0800 024 247

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